

# COST *and* MANAGEMENT

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# • EDITORIAL •

## **Economic Ruin! No—There Really is a Silver Lining**

How many of us appreciate how LUCKY, economically, we CANADIANS are, and apparently are going to continue to be, for some time in the immediate future?

This is a democratic and capitalistic country—thank our lucky stars.

During prosperity, the socialist membership and class is a losing "ism". As soon as their class obtain enough for their own comfort they in turn become capitalists and moreover the "MISER" capitalists, whose wealth is often not distributed till the second or third generation.

This "raising the standard of living," is, in Canada, a ridiculous farce in that anyone who desires a better standard of living can initiate it and achieve it by his own efforts and ambition to that end. There are exceptions, it is true, which only confirm that it is possible.

The production effort of Canada during the war years has made us aware of the economic possibilities for Canada in world commerce and trade. Socialism might prosper in this democratic dominion, if it were not for the fact that capitalism, or private enterprise, has in recent years proven its ability to produce more and better goods, with more and better jobs, for any who are anxious and willing to work, than any other system yet known to the civilized world.

At the present time we do not appear to be making the progress in reconversion and post war recovery that the Economists in high authority have designed for reconstruction. Might it be that this country is, to some extent, "TOP HEAVY" in "ECONOMIC DIRECTION"? It is almost evident that our present Capital-Labour controversies are not in the DESIGN of the higher authorities.

We Canadians may not realize how fortunate, yes FORTUNATE, we happen to be in comparison to the rest of the world. It may seem that we have lost. There are indications that we, as a nation, as Canadian people, are, at this very time, in the favourable position of attaining GAINS that will many times off-set the losses we may have perhaps, in the majority of cases, THINK WE LOST. We cannot, literally, lose what we have not yet achieved.

There are economic cycles. The trend of production, trade, commerce prices, during the years ebb and flow, as definitely as the mighty ocean. Artificial manipulations of economic progress, in socialism or totalitarianism, do affect the trend. The ultimate pay-off happens, evidently without design, eventually.

Many of our more mature business men, and women can remember the period of prosperity that followed the last war. That period was designed. The period of retribution was delayed till 1929. That prosperity lasted

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for approximately and for the average person, twelve years. The plan was, after the war years, to raise the standard of living in this country, and also in the United States, generally. There is no doubt about the fact that this was accomplished and experienced by the upper classes, perhaps at the expense of the lower classes. When the levelling off of standards came it severely reminded us that any standard of living need not be brought up with the idea of keeping it on that basis permanently, without individual effort and productive work on the part of individuals themselves.

The deflation depression experienced in the early thirties was a money scarcity. It was in fact a money deflation.

### A COMMODITY DEPRESSION

There is some deprivation on the part of some classes of Canadians at the present time, due to the basic materials production being reduced by strike action. The number of families in economic difficulty, even now, is much lower than all those affected by the depression of the thirties. It is much lower than might have happened had we been allowed to participate in the designed spending splurge that production could have started, and then deflated by means of the cycle of a money depression. We Canadians are now in a commodity depression. There is lots of money in the country. There are few that do not have money in some "quick" form or other. For this reason we are taking this depression, in commodities, in our economic stride and certainly much more conveniently, than we did or could a money scarcity. If we would acknowledge it, we are being taught to save and spend carefully and wisely. It is the best lesson in economic living that we could ever have learned. Many of us will not be buying, so soon, many of the things that we would have purchased immediately after the end of the war, if they had been available. In the final summarization, we may come to the conclusion that we do not need many of the things that we **THOUGHT WE NEEDED**, and during this cooling off period we may not spend our money in that manner. The over-all condition would seem to suggest that the designed inflation and in turn deflation cycles have been remarkably flattened out. Neither will be as severe as it might have been had production been allowed to proceed on a full-out pace. This commodity depression has made us wary of a money scarcity and depression, while at the same time leaving us in much better financial condition, as a nation, to face one, as, if, and when it does come.

### THERE MAY BE SILVER AND GOLD BEHIND THESE CLOUDS

While we are moaning about the production that might have been, let us try to count our blessings.

Our export business has been reduced, according to some reports. How much of that trade would have been shipped to countries being financed by Canadian money? If those debts would have been bad, which might have happened to be, as a country, we have lost nothing. On the other hand, and from another point of view, our resources have been protected and preserved for the more profitable trade which will come in due course through normal effort.

Domestic consumption has been held in check. That is good because

## COST AND MANAGEMENT

the non-essential purchases will be further delayed and the immediate DEMAND has been lowered so that the export field may still be profitably promoted in the pace that other countries may financially handle.

From the economic cycle observation, it would appear that the upward trend of production, which could easily be accompanied by inflation, has been somewhat levelled and is certainly not in the violent short term trend.

Past experience has shown that periods of drastic production and business volume have resulted in inflationary periods, which in turn have been followed in due course by correspondingly drastic compensating deflationary periods.

Regardless of the fact that the programs of reconstruction, reconversion, and rehabilitation have been slowed down, the result has been a tempering of the prosperity trend from a quick high volume accomplishment, to a gradual and probably more natural, and definitely more universally substantial and increasing volume. In face of this our economy should be BETTER LONGER.

It may seem hard for some of us, but, it should ultimately be economically better for most of us.

Put on your rose coloured glasses. The Canadian economic future is not unfavourable—do not bite the hand that feeds you—support and promote all portents of GOOD.

---

## New Members

### Calgary

Wm. H. O'Reilly, 1116-16th Ave. W., Calgary.

### Alberta Society Members At Large

D. G. Kemble, 121-2nd Avenue S. E., Medicine Hat, Alta.

### Hamilton

George Hutchinson, International Harvester Co. Ltd.

Ralph Cooley, Hamilton General Hospital.

Frederick R. Hartley, Cockshutt Plow Co. Ltd., Brantford.

Robert G. Wands, International Harvester Co. Ltd.

Miss Agnes P. Hunter, Steel Co. of Canada Ltd.

A. J. Molineux, Board of Education.

H. E. Kelly, N. Slater & Co.

Wm. D. Macklem, Steel Co. of Canada Ltd.

John A. Lowrey, Dept. of Veterans' Affairs.

Wilfrid F. Smith, Burlington Steel Co. Ltd.

Cecil R. Freeman, War Assets Corp'n.

Roy H. Hayward, Dominion Glass Co. Ltd.

Robert M. Rowley, Steel Co. of Canada Ltd.

Frederick J. Horsley, Steel Co. of Canada Ltd.

C. M. Smith, The Frid Construction Co. Ltd.

Emile H. Desy, Cockshutt Plow Co. Ltd., Brantford.

William D. Stretton, Tope Construction Co.

Joseph E. LeGear, Reliable Life Insurance Society.

Kenneth T. Purdy, Brown Boggs Co. Ltd.

Wm. R. Leckie, 70 Burlington Avenue, Burlington.

## NEW MEMBERS

Wm. P. Manzer, Steel Co. of Canada Ltd.  
Andrew Douglas, Hamilton Bridge Co. Ltd. and Sawyer Massey Co. Ltd.  
E. G. Young, Mercury Mills Ltd.  
David J. Canary, International Harvester Co. Ltd.

### Kingston

Wm. J. Dennee, Canadian Locomotive Co. Ltd.

### Kitchener

D. H. Erdman, Waterloo Manufacturing Co. Ltd., Waterloo.  
John M. Cotey, Waterloo Mfg. Co. Ltd., Waterloo.

### Montreal

Arthur Stanfield, Sherwin-Williams Co. of Canada Ltd.

### Niagara

Cyril G. Luce, Thompson Products Ltd., St. Catharines.

### Ottawa

E. A. Leftly, C.A., Geo. A. Welch & Co.  
G. L. Sheppard, Public Accountant.

### Toronto

A. W. Stringer, North Institute of Technology Ltd.  
H. W. Robinson, Canadian Pacific Railway.  
J. M. Reynolds, Rogers Majestic Ltd.  
Graham T. Scott, Dominion Paper Box Co. Ltd.  
Blake Howard, 112 Adelaide St. E.  
Arthur Evans, The Premier Vacuum Cleaner Co. Ltd.  
A. A. MacLean, Gutta Percha & Rubber Ltd.

### Victoria

R. W. Frayne, National Health & Family Allowance.

### Windsor

Gordon Hobbs, Ford Motor Co. of Canada Ltd.  
Charles F. Martin, Ryan Fuel & Supply Co. Ltd. and Ryan Contracting Co. Ltd.  
George W. Hames, Sterling Products Ltd.  
Thomas B. Searles, Ford Motor Co. of Canada Ltd.  
Lorne J. Hymers, Backstay Standard Co. Ltd.  
Robert J. Hiscock, Ford Motor Co. of Canada.  
Richard J. Nunn, Auto Specialties Mfg. Co.

### Non-Resident

Henry I. Onyett, Spruce Falls Power & Paper Co. Ltd., Kapuskasing, Ont.  
Charles Kraitberg, Smith, Schater & Gilman, Winnipeg, Man.  
John F. C. Rodger, Service Station Equipment Co. Ltd., Winnipeg, Man.

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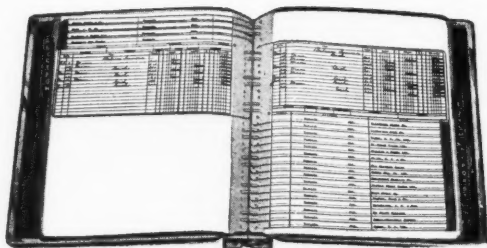
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SYDNEY, CHARLOTTETOWN.

## Chapter Notes

### FORT WILLIAM-PORT ARTHUR CHAPTER

The first meeting of the 1946-1947 season commenced with a sumptuous chicken dinner at the Provincial Paper Mills, arranged by Messrs. A. G. Scott and S. A. Arthur. At the conclusion, the members of the Society were taken on a tour of the vast workings of the paper mill, which was highly entertaining and instructive.

At 8.30 the meeting in the recreational hall was opened by Chairman R. B. LeCocq, who welcomed the 40 members and guests and then extended his congratulations and those of the members to Messrs. Scott and S. A. Arthur on their recent promotions to high offices in the Provincial Paper Ltd. organization. His remarks were warmly applauded.

The report of D. R. Harrison, who, as our delegate, attended the conventions of the Dominion and Provincial Accounting Societies, was then given. Mr. Harrison, who covered much ground in a short space of time, was very thorough. At the conclusion, W. J. Strachan complimented him for his excellent report and on his appointment at Honorary Treasurer of the C.S.C.A. & I.E.

Mr. A. J. Blanchard, of Stevenson & Kellogg, Ltd., was then introduced by R. B. LeCocq. We were indeed fortunate to have this industrial engineer present with us this evening.

Mr. Blanchard's subject was "Job Evaluation," and during his address he stated that job evaluation is about 30 years old and that making a job evaluation the man must be entirely divorced from the job. Some of the factors involved—education, experience, initiative, errors, contact, supervision and direction, physical demand, working conditions.

In all cases one or more industrial engineers sit in with the rating committee.

After the job has been rated, a scale of wages is drawn up, showing for the same job (1) starting wage, (2) experienced operator wage (3) the top level.

At the conclusion of Mr. Blanchard's address he answered a number of questions put to him by the gathering and gave his views as follows: Union reaction is favorable to job evaluation, that general wage increases are not good, that living costs influence wage rates, that the general wage rates in a community may be a factor, that it is helpful to consider the wages of a particular firm with the wages of the industry in general.

R. K. Piper moved a vote of thanks, which was heartily seconded by the members' spontaneous clapping. W. J. Strachan moved, E. G. Charnock seconded, a motion of thanks to A. G. Scott and S. A. Arthur for their efforts on behalf of the chapter.

The chairman announced that Gordon Brown, vice-president, had accepted the position as convenor of the students' committee. He then introduced Messrs. Cressman and Fikis, who had driven from Beardmore to be with us this evening.

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### CALGARY CHAPTER

The first regular meeting of the fall season was held on Wednesday evening, September 25th, at the Avenue Grill, with our Chairman, Ross Humphries presiding.

After a hearty meal, at which 40 were in attendance, Fred Ougden, Secretary of the Provincial Society, was called on for a brief report on the recent meeting of the Executive held at Red Deer. Mr. A. J. Davis then gave us a report and a resume of his trip East and the Annual Meeting of the Canadian Society held in Niagara Falls at which he was in attendance and represented the Calgary Chapter. As such representative, he was presented with the "Ferne" trophy which is given each year to the Chapter showing the greatest proportionate membership increase. The "Trophy" was displayed to the Chapter members and we wish to take this opportunity of expressing our pride at winning the trophy this year but will put forth every endeavor to retain it in the future.

Our immediate Past Chairman, Pat Bowsher, was the speaker of the evening, choosing a very appropriate and interesting topic, "The Industrial Accountant in the Post-War Era". Pat had previously given this "talk" at a meeting of the Lethbridge Chapter and because of the "meat" it contained was requested to repeat it before the Calgary boys.

As this is our first reporting for some time the Chapter wishes to extend its sympathies to Walter Nobbs, Chairman of the Provincial Society in Alberta, on the passing of his beloved wife during the early part of the summer.

### HAMILTON CHAPTER

The Hamilton Chapter started the new season with a well-attended meeting on September 26th, at the Royal Connaught Hotel, William Baillie, R.I.A., local chairman, presiding.

The meeting was addressed by A. G. Howey, R.I.A., on the subject of "Do Present Day Balance Sheets Portray the Facts?"

The speaker first reviewed the accounting problems of industry during the war. These problems were aggravated by innumerable laws, acts and codes, that made it practically impossible to prepare a Balance Sheet serving management, shareholders and government. Its presentation was usually accompanied by a number of qualifying statements that rendered the document more or less confusing.

Mr. Howey then proceeded to warn his audience that a considerable degree of restrictive measures arising out of the acts and codes developed during the war may prevail for some years to come. Industry must be prepared to face these conditions along with a disrupted peace-time economy, and a legacy of shop equipment that cannot be readily adapted to post-war requirements.

The speaker also emphasized the fact that criticism of the government, in itself, accomplishes nothing. The accounting profession should be more emphatic in seeking representation on those Government Boards that prepare the demands for various types of information. The government also should be required to be up to date on its own statements and regulations, and thus enable industry to establish its costs with pre-war efficiency.



## CHAPTER NOTES

### KITCHENER CHAPTER

Increased membership and more student activity during the present fiscal year were advocated by G. Mel Walker, chairman of Kitchener Chapter, in his inaugural address at the first fall meeting held at the Commercial Hotel, Preston, Wednesday, September 25. Mr. Walker succeeds E. C. Codling of Fergus, past chairman.

Two new members were accepted, R. A. Mullen of Galt and D. H. Erdman of Waterloo, being introduced by Vice-Chairman V. M. Buchanan. Reginald Kidner of Preston and Byron Thouless of Galt were named auditors.

The chairman presided for a discussion on "Overhead" with various members taking part. Norman Barfoot spoke briefly on the student activities planned for the coming winter. W. L. Jardine of Preston, chairman of the Program Committee, summarized the proposed meetings to be held in the various Chapter centres.

J. Nelson Allen, secretary manager of the Society, addressed the meeting, touching on problems facing the organization in connection with the course sponsored by the Society.

### OTTAWA CHAPTER

The opening meeting of the Ottawa Chapter for the 1946-47 season was held at the Ontario Hughes-Owens Cafeteria on Thursday, September 19, 1946.

A delicious dinner was served to 32 members and guests.

Frank E. Wood, newly elected President of the Ontario Society, gave the members a very interesting report on the recent annual convention.

Dr. J. S. A. Bois, staff psychologist of Stevenson Kellogg Limited, Montreal, was the guest speaker of the evening. His subject, "Advanced Executive Training," dealt with the selection of personnel for executive positions. This address proved to be most instructive to a very attentive audience.

A presentation was made to one of our members, R. A. Burdett, who leaves to take up duties in England.

The chairman, A. G. Hyndman, presided.

### ST. MAURICE VALLEY CHAPTER

The St. Maurice Valley Chapter of the Cost and Management Institute opened their first year's activities with a visit to Drummondville.

On Saturday, September 21st, a party of 30 members and friends of this Chapter, under the direction of its first Chairman, Mr. Henry Pike, Office Manager at the Shawinigan Chemicals Limited, left Shawinigan Falls by bus at 8 a.m. for Drummondville, where they visited the plants of Canadian Celanese Limited and the Dennison Manufacturing Co., Limited.

On their arrival at the Celanese plant the group was welcomed by Mr. H. Craniford, Cost Accountant of the Celanese plant. A tour was made of this modern plant, with various members of the Celanese staff conducting small parties through the various departments. This tour was most interesting and instructive; the spinning, weaving and dyeing operations of Celanese yarn being well worth seeing. This tour ended by a visit to the

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cafeteria, where the Celanese Company served refreshments to the delegation.

The group then proceeded to Le Manoir Hotel, Drummondville, for luncheon as guests of the Dennison Manufacturing Co. Mr. John Grady, Plant Manager of the Company, expressed his gratification at our coming to Drummondville, and hoped that the afternoon visit to their plant would prove interesting to the members.

Mr. Craniford, of Celanese Company, then welcomed the members and regretted that the time at their disposal had been too short to go through all the phases of production, but sincerely hoped that at some future date the members would have the opportunity to come again and see more of the Celanese plant and their city.

At the luncheon, Mr. Henry Pike, Chairman of the Chapter, expressed the thanks of the St. Maurice Valley Chapter to the Management and staff of both Companies for their kind hospitality, and also to Mr. A. Burdett-Jones, Member of the Montreal Chapter of the Society, for his assistance in arranging the visit. He also felt that the success of the trip augured well for the first session of the Chapter, and from the encouraging remarks which had been passed he was sure that the Directors would have no hesitation in arranging other such visits next season. There are other interesting plants in the vicinity and he felt that much could be learned from these tours.

He also mentioned that a very complete program for Lecture meetings for the coming season had been arranged and hoped that all members would be present for the opening dinner on October 9th, when Mr. A. W. Gilmour, C.A., Assistant to the Inspector of Income Tax, Montreal, would speak on "Some Phases of Income Tax Legislation."

Immediately after the luncheon the group left for the Dennison plant, where Mr. A. Burdett-Jones, of this company, arranged a tour through the various departments of the plant. This tour also was exceedingly interesting, coloured crepe paper, Christmas wrapping paper, labels, tags, etc., being produced in seemingly unendless quantities.

The party arrived back in Shawinigan in the early evening, feeling that the inaugural activity of the Chapter had been very instructive and enjoyable.

## VANCOUVER CHAPTER

Major G. M. Braund, of David Spencer, Ltd., was the guest speaker at the opening meeting of the Vancouver Chapter, held in the Hotel Georgia, on Thursday, September 12th, and presided over by Mr. R. C. Lucas, R.I.A., Chairman.

Major Braund's subject "What, Training?" dealt with personnel and training problems encountered in business to-day and a very lively question period extended the evening.

Reports were heard from the various committees and plans for the winter months were reviewed.

The next meeting will be addressed by our busy Provincial Membership Chairman, Mr. R. C. Girling, R.I.A., who will take on Cannery Costs. This will be very interesting as Mr. Girling has been connected with the Canadian Cannerymen for over twenty years.

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### VANCOUVER CHAPTER 1946-47 DINNER MEETING DATES

York Room, Hotel Georgia, 6.15 p.m.

October 10th

October 31st—Special National President and Secy.-Manager meeting.

November 14th

December 5th

January 16th, 1947

February 13th, 1947

March 13, 1947

April 10th, 1947

The October 10th meeting will be addressed by our member, Mr. R. C. Girling, R.I.A., who will talk on Cannery Costs. This should prove a very interesting discussion, as Mr. Girling has been associated with the Canadian Cannery for over 20 years.

We hope that if any members from other points are in Vancouver on any of the above dates that they will attend our meetings if possible.

## WINDSOR CHAPTER

Our regular monthly meeting was held in the Norton-Palmer Hotel on September 19th last, with an attendance of fifty. This being the first meeting of the season, our new chairman, Jack Copland, introduced the new directors and committee chairmen, after which a presentation was made to the retiring chairman, Mr. Jack Ayerst. Our speaker of the evening was Mr. Harold S. Ireland, vice-president and general manager of the Canadian General Rubber Co., Galt, Ontario, who chose as his topic, "A Daily Profit and Loss Statement." Mr. Ireland proceeded to very ably demonstrate to the audience not only how such a difficult system was possible, but also the extreme value of such a statement to management. The talk was unusually well received and created quite a lively discussion period after the meeting. Our vice-chairman, Mr. Bill Gatfield, then outlined plans for a new idea in our Chapter, that of having a committee set up to answer questions on accounting which any of our members might have. These questions would be sent in to the committee who would answer them on the next meeting night. The meeting adjourned at 9.45 p.m., after which was held an informal get-together, at which refreshments were served and which was well attended and much enjoyed.

## Current Literature Digest

By Harold Bricker, C.G.A., R.I.A.

In our June, 1946, edition, we gave you information from a paper on report writing. This appeared to be for those executives who have definitely such responsibilities. This was not entirely intended as such and, it was implied, that it would be of general interests. In a recent issue of *Canadian Business*, this same subject is covered by A. H. Mitchell, under the heading of "Modernize Your Business Letters". In recent years, it has been determined that about 85% of modern business is conducted by phone and confirmed by mail, or conducted entirely by mail. During the war, much internal correspondence was reduced by the elimination of unnecessary typing, for the conservation of paper, and this was accomplished by shortening communications to notes. Only the bare facts were considered important enough to be written.

The stilted and stereotyped phrasing of business correspondence dates back to the days when all office business was done by men, and in hand writing. Through habit, many of the old phrases have been carried along to the present day in many of the older concerns. It is not a question of retaining a tried and tested business method, for poorly constructed letters are **BAD BUSINESS**.

More and more Canadian organizations are having expert consultation for their staff in the matter of letter writing. Much can be gained in **TIME** and **BUSINESS EFFICIENCY** by streamlining and humanizing the regular correspondence.

In analyzing general correspondence, it has been found that four common faults might be described as follows:

1.—Excessive use of stereotyped and curt phrases that offend good customers and prospects. Many of these letters are also so involved and repetitious that they are difficult and confusing to read.

2.—The use of superfluous words and phrases. The average letter is from 20 to 60 per cent longer than necessary to accomplish its purpose effectively but graciously.

3.—Approximately 10 to 15 per cent of business letters would be unnecessary if the original letters had been clear and explicit.

4.—The writing of apparently unimportant letters is delegated to inexperienced correspondents without proper supervision. Management fails to realize the important role good letters can play in creating and maintaining goodwill.

As an example of superfluous phrasing, in a non-industrial letter, we give, as an illustration:

"We thank you for your communication advising us of your change in address as above and we are pleased to advise you that we have had proper notations of same made on the Company's records of the above numbered policy on your life."

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This letter can be cut 60% by writing simply:

"Thank you for informing us of your new address, to which all future mail will be sent."

"On Writing", in the Federal Accountant makes a comment on the use of common words. Complex or unusual words make writing harder for anyone to understand, with little, if any, benefit to the reader. It is the subject matter that counts. If that is worth reading at all, it is worth putting into such language as will be understood by the majority of people.

Unnecessarily long, technical, or highbrow words and phrases make readers think that the writer is more anxious to impress than to inform, or is a pompous person trying to show how much he thinks he knows.

The example of a round-about expression is:

"Whenever the occasion arises that I find myself in the position of being able to accompany you, I shall be delighted to give myself the pleasure of doing so."

This information could very effectively be expressed in:

"I shall be pleased to accompany you when I can."

Verbosity can also be obnoxious, as in the statement:

"He promoted the discussion and synthesized the various categories of reaction."

Could one be better informed of this than by the simple:

"He started the talk and summed it up."

While we cannot expect all the staff responsible for the correspondence of the business, to be literary minded or exemplify those qualities, there is room for STREAMLINING. It should be interesting at this time to read a statement by Joubert, quoted by Arnold in "Essays on Criticism."

It is by means of familiar words that style takes hold of the reader and gets possession of him. It is by means of these that great thoughts get currency and pass for true metal, like gold and silver which have had a recognized stamp put upon them. They beget confidence in the man who, in order to make his thoughts more clearly perceived, uses them; for people feel that such an employment of the language of common life betokens a man who knows that life and its concerns, and who keeps himself in contact with them. Besides, these words make a style frank and easy. They show the writer has long made the thought or the feeling expressed his mental food; that he has so assimilated them and familiarized them, that the most common expressions suffice him in order to express the ideas which have become everyday ideas to him by the length of time they have been in his mind. And lastly, what one says in such words looks more true; for of all the words in use none are so clear as those which we call common words, and clearness is so eminently one of the characteristics of truth, that often it even passes for truth itself."

The communications of modern business are conceded to be more efficient, more effective in disregarding "traditional style".

VARIOUS COMMENTS? What are authorities saying?

In regard to costs, labour, material and other costs, an interesting comparative statement has been made by a consulting economist, Mr. R. J. Deachman, of Ottawa, Ont.:

Here are 100 cubes, two inches to a side. They are coloured—30 green,

## CURRENT LITERATURE DIGEST

these represent labour; 50 red, raw materials; 20 white, these represent "all other costs."

Stand back, look at them from a distance, the colours blend. Snap out of it, come closer, you have before you a product into which has gone labour, raw materials, and an omnibus item, which we call "all other costs."

Green, that is labour, wants more, a larger share of the total product, claims that it can take some from the others, yet what is left will be as great as it was before. Try it yourself, find out how impossible it is.

If it can be done, then the reverse is also true; Red and White can take from Green, and Green will be as rich as it once was. Ask Green if it believes this to be true?

Pat Conroy of the C.C.L., Ottawa, says our composite program is designed to increase production and raise the standard of living to a higher level than existed in the pre-war years. There are now between two hundred and fifty and three hundred thousand people unemployed, and it is obvious that the nation cannot continue to indulge in this tragic waste of labour. (Just how the putting of thousands of union members into strikes helps the situation, he does not say).

Alfred Charpentier, of the C.C.F.L., Montreal, P.Q., says, The purchasing power of wage earners in Canada is somewhat related with their nominal wage rates but it is more closely dependent on the real wages that they earn. Their nominal wage rates are what they receive from their employers—their real wages are what the former will buy, in value. The purchasing value of their real wages is most of all determined by the cost of living, then by their family obligations, habits and tastes.

Conditions being what they are, a general wage increase would increase the purchasing power only if prices of goods remain unchanged; even at that, under the common practice of uniform percentage of wage rates increase, the fairly well-paid earners would be far better off than the low-wage-paid group of earners.

### INSTINCT OR EVERY-DAY HORSE SENSE?

If one cannot figure the present situation out for one's self, before taking the word of the authority, so-called, ask yourself, "HAS THIS MAN AN AXE TO GRIND?"

ECONOMISTS sometimes argue that there are two schools of thought on this point. Ricardo said that wages must depend on prices, and that the Austrian school argues that prices must depend on wages. (Of course there are a lot of new factors in modern production). Neither school of thought apparently notes that it does not matter if the hen or the egg came first in this case, since all that matters is, whether consumers will pay a certain level of prices. It is becoming clear, particularly in Canada, that the present price level is higher than consumers will pay willingly.

Perhaps the ECONOMIC LAWS of "SUPPLY AND DEMAND", are beginning to take form. Perhaps we shall be able to buy, sell and work in accordance with the democratic freedom and individualism enjoyed in the Canada of yester-years.

## Cost Accounting for Control of a Machinery Manufacturing Plant

A Thesis by GORDON MASON

The production and planning division is the heart of the organization. All production is scheduled and routed by the planning department. It releases manufacturing runs to the factory office, checks quantities on hand against material requirements, issues part production and purchase requisitions, bearing in mind always their responsibility to meet budgeted production requirements.

The plant is departmentalized into prime producing departments, with the service departments segregated. A studied layout has been made of the departments with a view to facilitating the flow of work through the plant. Storerooms are provided, where needed, convenient to the machine assembly department for the storing of assembled parts.

As stated previously, a Standard Cost System is used. Under this plan standard costs are set up for each type of product, and costs are not collected by jobs. Materials, parts, etc., are included in these standard product costs on the basis of standard specifications. Direct Labour costs are determined by operations, by parts, without regard to the specific products in which the parts may be used. Manufacturing Overhead is applied by the use of standard budgeted overhead rates. All costs are "tied-in" with the financial books through the cost ledger control account in the General ledger, and control and proof of the various cost elements is obtained continuously. The Chief accountant then, under this system, is the cost accountant, having all phases of the budgetary procedures and control under his supervision.

### STANDARDS

A standard of productive output has been set for each department and cost center in terms of direct labour hours. The manufacturing output does not consist only of completed machines, but also of a number of parts, some of which are used in the manufacturing operations, and some as replacement part sales. The sale of replacement parts forms an appreciable part of the sales dollar income. Because of this varied output, the normal percentage of productive capacity, or 100% standard, has been expressed in direct labour hours. 100% standard productive capacity represents 75% of maximum plant capacity.

Standard specification sheets are set up for all products, including finished parts. Form A illustrates these sheets. They are used for both material requirements for a single part, and also parts and material requirements of complete assembled machine.

A standard price has been set for each unit of purchased direct material. Since this company has been in business for some time, it was possible to study past records of invoices, present day prices and estimated future quotations to arrive at standards for direct materials. These standard prices are set up in a visible record file.



## COST ACCOUNTING FOR A MACHINERY MANUFACTURING PLANT

A standard cost sheet, Form B, is set up for each product. (Product, as used here, includes parts production.) This standard cost sheet provides sections for manufactured parts and materials, labour, overhead, and total standard unit cost. The manufactured parts section would not be used, of course, in the cast of a single part made from raw materials. All material quantities were taken from the standard specification sheets, standard material prices were obtained from the price record mentioned above, parts cost was obtained from the standard cost sheet covering the particular part.

Standards for Direct Labour have been set up by labour operations for both standard time and standard rates per hour. The direct labour time standards were set by time and motion studies of the various operations. The standard labour rates were set as close as possible to the actual rates paid, after considering the probable future trend in conjunction with past experience. The operation time and rates were set up on Direct Labour Specification cards for each department and cost centre. Form C. illustrates this card. In some cases, where the operations were similar, it was possible to set a blanket rate for the department.

Standards for manufacturing overhead have been set up in Burden Budgets, for each producing department. An annual overhead expense budget was first prepared at the standard level of productive output. This was done by considering each individual item of expenses as to its need and value. Past records of overhead expense were the principle source of information. Broken down into budgets for a one-month period, they became the medium for computing a standard rate per direct labour hour for each cost centre. This rate, times the sum of the allowed hours on each item as enumerated in the direct labour operations section of Form B, gives the amount of standard overhead applicable to each product, and is shown as such on the standard cost sheet.

The Standards, as enumerated above, having once been set, will not be changed unless a change in manufacturing processes is made or a drastic price increase or decrease becomes effective. Minor changes in cost will be reflected in the variance accounts.

### VARIANCE ACCOUNTS

Variance accounts are maintained for the three cost elements, Material, Labour and Overhead. Each of these elements is further broken down into Cost Variance and Usage Variance accounts. Variance entries are made prior to charges to Work in Process, thus Work in Process entries are at standard cost. All other accounts needed in this system will be brought into the picture in their logical sequence, rather than listing them at this point.

A numerical code system has been adopted to the chart of accounts. Each of the classifications of Assets, Liabilities, Capital, Expenses, etc., have been given a series of numbers:

Assets .....	A100 to 199
Liabilities and Capital.....	L200 to 299
Income .....	I300 to 399
Clearing Accounts.....	C400 to 499
Expenses Manufacturing.....	E500 to 599

## COST AND MANAGEMENT

Expenses Administrative.....	E600 to 699
Expenses Marketing.....	E700 to 799
	etc.

Items in the E Group, with the department number used as a prefix, would indicate the kind of expense and the department in which incurred and chargeable.

The sub classification could go on to considerable length, and still be kept in a small series of numbers easily remembered, by the use of a decimal point.

## THE MANUFACTURING ORDER

To start the wheels turning and begin the production of goods an order must be given to the factory. Form D illustrates the form of the Manufacturing Order. The planning department has much to do with the issuance of these orders. The order is a technical statement of the part or machine to be manufactured, with the operations to be made on the material and the routing it is to follow through the factory. The Production and Planning division make up Master Manufacturing orders complete with Bills of Material, operations needed, etc. Experience and the production Budget guide them in the quantities of each manufacturing run.

The Master Manufacturing Order, once made up, is run through a ditto machine, making several copies. These are distributed, in part, as follows:

- Each producing department listed in the routing.
- Factory Office ( Materials Chaser
- ( Time Clerks
- Cost Department
- Inspection Department
- Stores
- Cardboard Copy ( to accompany run through plant
- ( to destination, which might be
- ( finished stores or shipping dept.

Manufacturing orders are serially numbered, those for machine assembly M P 5000 up, for part production F P 100 up. Sundry service orders are numbered S 10,000 up.

## MATERIALS CONTROL

Inventories of Direct Materials are carried in the Stores Ledger at standard cost. Inventories of supplies, which ultimately find their way into cost through the application of Overhead Burden Rates, are carried at actual cost.

Form E illustrates the form of the stores ledger sheet used in the perpetual inventory system to control both raw materials and manufactured parts. The standard cost of the item is obtained from the Standard Cost of Materials Record which was mentioned under setting of Standards. This record includes both purchased and manufactured items. Supplies are priced out at average cost, and any extra cost over the standard allowed at the productive level is picked up through the Overhead Variance accounts.

When Planning department during the course of its activities, plans for

## COST ACCOUNTING FOR A MACHINERY MANUFACTURING PLANT

the production of some item, specifications and bill of materials are gathered together. The bill of material is checked by stores accounting against records of raw material and completed parts, and entries are made in the reserved section for the quantities called for. The number of the bill of materials against which the store items have been reserved, is entered in the memo column. In the event that there are not sufficient quantities on hand to complete the bill of materials, a memo is made on the bill of materials of the quantity on hand, and these are reserved. A copy of this bill of materials is kept by Stores Accounting in the active file until such time as the materials required have been gathered together in Stores.

From a copy of the bill of material, with the notations made by Stores Accounting, Planning is now in a position to place purchase requisitions and parts production orders to complete the bill of material.

While maximum and minimum quantities are maintained on most material items, and stores accounting, through Planning department places requisitions to maintain these amounts, the above procedure is still necessary to maintain standard conditions and eliminate costly delays for lack of material on the line when needed.

Purchase requisitions for material originating in the Planning department, and requisitions for special purchases originating in the department requiring them, are forwarded to the Purchasing department. See Form F for Purchase Requisition.

Upon receipt of the purchase requisition the Purchasing department makes the necessary arrangements to purchase the materials required, and issues a purchase order. The Purchase order, Form G, provides a space for the account number to which the purchase is to be charged. This is usually taken from the Purchase requisition, but in cases where it is not shown, the Purchasing department must insert it after making enquiries or consulting the chart of accounts.

Five copies of the Purchase Order are made. The original goes to the vendor, two copies are retained in the Purchasing department, one to the Receiving department, and one to the Cost department.

Of the Purchasing department's copies, one is filed numerically, the other alphabetically for use in follow-up work.

The Receiving department checks the incoming materials with the packing slip. Receiving's copy of the purchase order is checked with the packing slip to see that the material is in accordance with the order. If only a partial shipment has been made, the quantity received and the balance due is noted on the back of the purchase order copy. The Receiving Slip, Form H, is then made in four copies.

A copy of the receiving slip follows the material, after it has been passed by Inspection, to stores or other department, one is retained by Inspection, one to Purchasing department and one to the Cost department.

Incoming invoices are sorted into groups according to their discount dates by Accounts Payable department in the general accounting, and turned over to Purchasing for verification. Purchasing checks all prices, extensions, etc., compares the receiving slip with the quantities shown on the invoice, and attaches the receiving slip to the invoice. The purchase order is pulled, notation is made on it of quantities received and the balance due. An

## COST AND MANAGEMENT

approval stamp is stamped on the invoice and the account to be charged is written in. The approval stamp provides details as to account number to be charged, freight or transportation adjustments, initials of checker and signature of Purchasing Agent.

At this point any difference between the invoice and receiving slip is noted and instructions are given for the preparation of a debit memo, a copy of which is attached to the invoice. When this invoice is paid the debit memo is deducted.

The invoices are now passed on to the Cost department. It sometimes happens, because of the discount date, the invoice must be paid immediately, but usually there is sufficient time for the Cost department to have them first. It is the usual practice to have all out-of-town purchases made F.O.B. to the Plant door, consequently the invoice includes freight charges, showing the laid down cost of the purchase. This has been taken into account when setting material cost standards from a review of past invoices, and should any difference arise in freight costs due to purchasing from a local supplier instead of out of town, it will be reflected in the variance account, since it is part of the cost of the material.

Cost department gathers together their copy of the Purchase order and receiving slip, and prepares to check the distribution of the invoice. All materials do not pass through stores. Heavy castings, such as the base of a machine, are delivered directly to the department which is to begin work upon it. However, the routine of charging stores account and drawing a requisition for release is still followed for control purposes. The Receiving slip shows where delivery has been made.

The invoices for Direct Materials are priced at the standard cost, and entered directly on the Stores Ledger cards. It is important that these entries are kept right up to the minute and not allowed to fall behind issues of material.

The invoices are passed on to the accounts payable department for payment.

A Voucher system is used. Every invoice, whether it is for materials or a service, is vouchered. A voucher jacket is prepared for each group of invoices of the same vendor. The vouchers are entered to the credit of Vouchers Payable in the Voucher Register in the order in which they occur.

The debit columns in the Voucher Register for the controls accounts are:

Raw Material Inventory (stand)	Selling Expense
Supplies Inventory	Administrative Expense
Material Price Variance	General Ledger, Sundry
Manufacturing Expense	

When these totals have been posted at the end of the month, along with the entry for Materials used, the subsidiary accounts Stores ledgers, expense ledgers, etc., should be capable of proof with their control accounts, thereby substantiating the detail postings made by the cost department.

It will be noticed that the Voucher Register contains a column for Material Price Variances. Postings to this column would have to be designated as either debits or credits. As previously outlined, the direct material invoices are priced at standard, and when entered in the Voucher Register Raw Materials Inventory is charged at standard cost, Vouchers

## COST ACCOUNTING FOR A MACHINERY MANUFACTURING PLANT

Payable credited for the actual cost, and difference, either debit or credit, in the Price variance column. Handling the price variance this way means that the price variance is picked up in its entirety at the time the purchase is made. Although this is not entirely satisfactory from the profit determination angle, it has the advantage of bringing to the attention of management for action an unfavorable price variance the moment it occurs, and not at some future date when the material is requisitioned out of stores and the opportunity to perhaps control the cost has been lost. Clerical work has been minimized, too, by this method, using only the standard cost for pricing requisitions, the dual costing of both actual and standard prices to determine the price variance on materials used has been eliminated.

### ISSUES OF MATERIAL

A strict rule that is impressed upon all personnel is that NO material of any kind can be issued from any of the storerooms without the presentation of a properly authorized requisition. The Stores Requisition, Form I, provides the information necessary for issues of material. It shows quantity, code number and kind of material; account to be charged; columns for unit and total cost; where delivered; date; requisition number; and signatures for both authorization and receipt of material. It is drawn in duplicate of different colors.

Stores requisitions for productive materials originate in the planning department. Where a bill of material has been made up a stores requisition is made as a covering document, simply authorizing the issue of materials called for by the Bill of Materials attached.

The Stores department retains the duplicate receipted copy of the requisition, and the original is sent to stores accounting. Here the requisitions or bills of materials as the case may be, are posted to the credit of the individual stores record card, and costed directly from the entry on the card. The entry for the reserved quantities is crossed off the reserved section of the ledger card at the time the requisition covering their issue is costed.

A material used summary is prepared on a voucher listed by stores accounting, of the summarized requisitions for the month, broken down into raw material stores and finished stock stores, in order that the adjusting credit entry to the control accounts may be made to account for the consumption of Materials.

### MATERIAL USAGE VARIANCE

The standard amount of direct materials applicable to the production of the month is the only charge for direct material allowable to Work in Process. This is calculated quite easily. Each manufacturing order issued during the month includes a bill of materials. This bill of material sets forth the standard quantity of material required for the particular run, and is made up from the material specification sheets. (Note that these specification sheets include an allowance for the known unavoidable wastage.)

The total amount of the priced bills of material covering the issues of stores to production for the month represents the standard material cost that is charged to Work in Process. The difference between this charge,

## COST AND MANAGEMENT

and the total standard cost of material actually issued, as provided by the Material Used Summary, represents the material usage variance. This amount is charged directly to the Material Usage Variance account and does not enter Work in Process Account, viz.:

Dr. Material in Process (stand.)	XX
Dr. Material Usage Variance	X
Cr. Raw Material Stores	XX
Cr. Finished Stock Stores	XX

Excess material that has been issued to production, and must be returned to the storeroom is handled on Returned Material slip, Form J. It is made out by stores in duplicate and a receipt is given to the department making the return. It is forwarded to Stores Accounting, where the value is computed and the entry is made in the issued section of the stores inventory card in red ink. Of course, these returned material slips are also listed on the Materials used summary, reducing the debit to material usage variance, and sometimes creating a favorable usage variance.

The amount of the Material Usage variance account is represented by the excess of stores requisitions over and above the bills of material. Therefore it is possible to segregate those requisitions that do not apply against a bill of material, and an unfavorable material variance can be traced directly to the department and product which caused the variance.

A system of physical inventory checking is utilized. Stores Accounting decides upon which item to issue a request to the stores department for an actual count to be taken. An effort is made to check each item at least once during the course of the year. If any difference results in the actual count as compared to the stores ledger sheet, an attempt is made to run it down. Failing this, the stores ledger is adjusted to actual count, and the difference is written off to the account Reserve for Inventory Adjustment.

Scrap, resulting from machining operations is collected periodically in the scrap bin. It is weighed, valued at the current market value, and charged under Scrap Stores. The offsetting credit is to overhead. It is not practical to segregate it by departments. When the scrap is sold, the credit is to scrap sales. The value set up under scrap stores is treated as cost of scrap sales, removed from stores and charged against scrap sales. Any difference left in the scrap sales account is closed out to Profit and Loss.

## LABOR CONTROLS

Daily Time reports for each workman are used to report the breakdown of the labor costs over the various operations and type of work performed. Form K illustrates the Daily Time Report.

For indirect labor and lost or idle time the operation number column would be used, the code number appearing there being a combination of the department and account number to be charged.

Only the actual number of fully completed operations are entered in the column for number of operations. This is certified to by the foreman of the department, since he is required to sign each time report.

These time reports are not made out by the men, but are compiled by a timekeeper from memoranda reports made during the day of each operation worked upon, time started and time stopped, department pro-

## COST ACCOUNTING FOR A MACHINERY MANUFACTURING PLANT

duction reports, certified by Inspectors, etc. Greater accuracy in time reports is aimed at under this method: the production of each man is tied in with the department production record, and only the summarized elapsed time of each operation appears on the time sheet.

Each morning in the payroll department the Daily Time sheets are compared with the clock records, Form L. The actual hourly rate is written in on the time sheet operation and transfer to the distribution sheet. The actual labor cost and number of operations now appear on the distribution sheets, and the total of all departments is checked with the day's labor total as provided by the payroll department to ensure that the correct amount has been distributed. The cost department then proceeds to make the standard cost extensions as provided for on Form N. When these are completed, it is possible to compute the labor variances for each department.

The Labor Variances are computed as follows:

### Performance Variance:

The difference between standard allowed hours, column (e) on form N, and actual hours, column (c), multiplied by the standard rate per hour gives the amount of the labor performance variance due to more or less time being taken than standard.

### Rate Variance:

The difference between the amount of the performance variance and the total variance, column (g), is the labor rate variance due to paying a different hourly wage than the standard.

In this way the status of day to day labor performance is maintained in daily reports for close control by management and department foremen.

Entries are not made each day from these labor distribution sheets. The closing entries to adjust the control accounts, Work in Process and Payroll account, etc., and to set up the variances are made in total amounts, at the close of each month.

Dr. Labor in Process .....	xxx	
Dr. Labor Cost Variance .....	x	
Cr. Labor Performance Variance .....		x
Cr. Accrued Payroll a/c .....		xxx

### Direct Labor Distribution.

An interesting point arises in the distribution of the weekly salary payroll. Salaries might more properly apply to the section on Overhead, but is discussed here because the weekly salaries are part of the payroll, being a subdivision of the total payroll.

Daily time sheets of course, are not used for salaried employees. Each department makes up a report once each week of their staff and the account numbers to be charged. The payroll department enters the weekly salary of each person in much the same manner as the hourly time sheets were handled.

In the cost department, a summary analysis is used on which each week's breakdown is entered. Inasmuch as this is a weekly payroll and the reports are received only once a week, at the end of the month an adjustment is necessary on the summary. If the end of the month falls in the middle of the week, an accrual of one-half of the previous week's

## COST AND MANAGEMENT

salaries is added to the analysis. This is of course reversed (entered in red) on the first line of the analysis for the following month. In this way the Accrued Payroll account records all liability for wages and salaries due at the close of the month.

### OVERHEAD CONTROL

Actual expenses and accruals for each month are assembled in the appropriate expense accounts in the Manufacturing Overhead Expense Ledger. Comparison between these and the standard budgeted overhead expenses allowed at the level of production enable the variances to be extracted. This constitutes only a step toward the control of overhead expense, since variance analyses themselves cannot effect control, but can only bring to the attention of management those items which are out of line and need attention. Frequent reports to department heads of budgeted figures compared with their actual performance assists materially in effecting control.

### ACTUAL OVERHEAD EXPENSE ASSEMBLY

The accounts in which we are interested at this point are the group of E accounts, and particularly the 500 to 599 group. The information recorded in these accounts is obtained from the original records, chiefly the following:

- The Voucher Register
- Payroll Analysis
- General Journal Vouchers
- Manufacturing Journal Vouchers
- Schedules of Fixed Charges
- Expense Material Requisitions.

Manufacturing Overhead account E500 controls a subsidiary ledger in which an account is maintained for each type of manufacturing expense. There would be no point in listing each of these expenses here in detail, since they are simply manufacturing overhead expenses common to most manufacturing enterprises.

Care was taken in setting up the chart of accounts so that the sequence of code account numbers grouped together similar accounts. In the expense group in addition, accounts were considered in the order of their variable or non variable relationship. It follows then, that the overhead expense ledger, arranged in numerical sequence of account numbers, automatically provides the necessary separation of variable expense and non variable required for control of overhead and budgetary burden rates.

Each time an entry is made in the voucher register in the control account column for overhead expense, it is also posted to the subsidiary ledger.

Not all items of overhead expense are charged directly to the overhead expense account. Such items as Insurance, Fuel, Misc. Supplies, etc., are charged first to Inventory accounts in the cost ledger, or prepaid expense accounts in the general ledger. Taxes and other accruals are brought into the expense accounts each month, so that cost of production will not be understated, and offset against reserve accounts.



## COST ACCOUNTING FOR A MACHINERY MANUFACTURING PLANT

Schedules of fixed charges have been set up to account for the monthly charge to operations. The first step was to allocate the fixed costs between the divisions, Administrative, Selling, and Manufacturing. Taxes for the year have been estimated, and divided into a flat cost per month. These were allocated to the divisions on the basis of total investment. The necessary charges to expense and the credits to reserve accounts can easily be made from the schedule. Those fixed charges applicable to the Manufacturing division are transferred to the distribution schedule, Form O, and allocated to the various departments on the bases of investment in each department.

Prepaid insurance costs are handled similarly. The insurance register provides the monthly cost, this being the amount allocated to the departments on the schedule according to the value of the assets insured.

Depreciation costs are obtained through the Plant Equipment register. A card is set up for each item of equipment. Form P illustrates this card. They are classified by departments, listing all details of cost and depreciation. The charges to be made for depreciation are quite readily gathered from this ledger.

Indirect material has been charged to the Overhead expense account from the material used summary compiled by stores accounting, and likewise the indirect labor has been charged to the various indirect labor classifications from the payroll distribution summary.

Now, assuming that all the original records have been posted, and that the subsidiary expense ledger is in agreement with the overhead control account, the individual expense account totals for the month are transferred to the Manufacturing Overhead Expense Distribution Sheet, Form Q. This form lists all the producing departments and service departments across the top columns, with the expenses in the grand total column at the left side of the page.

The individual expense items are allocated over the various departments from original records, schedules, and reports of usage. For instance, spoilage is allocated directly to the departments responsible from the Chief Inspectors reports. Taxes and depreciation on equipment direct to the departments from the schedules, Indirect labor from the labor distribution, Building costs from floor space schedules, and so on.

Manufacturing Journal Entries are prepared, from the overhead distribution sheet, transferring the expense control from the manufacturing overhead account, by crediting this account and debiting a separate overhead account for each department. The Manufacturing Journal Entry illustrated by Form R, is placed in a binder, and comprises the factory journal.

The next step is to prorate the service department costs over the producing departments. On some of the service departments standard percentages have been set for the apportioned charges to the producing departments, on others records of services provided are used. Where these are not available, total hours worked, direct labor hours worked, or number of employees, whichever applies to the particular service, is used.

At this point all of the manufacturing overhead expense appears in the columns for the productive departments. Manufacturing journal entries

## COST AND MANAGEMENT

are prepared for these apportionments, resulting in the closing of the service department accounts, all expense now being in the open productive department accounts.

The above procedure, dealt with in some detail, is extremely important, for these are the figures that are compared with the pre-determined budget allowances.

### WORK IN PROCESS AND COST OF SALES

The work in process is divided into three accounts:

Material in Process

Labor in Process

Manufacturing Expense in Process

As previously outlined, the work in process accounts are charged with the standard cost of all material, labor and overhead used during the month. Production is priced at standard cost from the products standard cost record, Work in Process is relieved of this cost and the debit is to Finished Goods Inventory. Daily production reports are required from each department, and the monthly summarized totals of these provides cost department with the necessary information to pull out the standard cost of finished production. The balance remaining in the work in process accounts represents the standard cost of all work in process. This is true since only the standard figures were charged into work in process, the variances accounts absorbing any difference from standard in over or under usage of the three cost elements.

Spoilage and defective work creep into any productive set up regardless of how well organized it may be, and must be accounted for. Work which cannot be repaired is considered as scrap. The Spoiled Work Report, Form T, is used to account for the costs of work which is scrapped. The work in process accounts are relieved of the standard cost of the material, labor and overhead applicable to the spoiled work, and Spoilage account (overhead) is debited. If the scrap material has any appreciable value, the value can be set up under scrap stores, crediting spoilage account, thus reducing the cost of spoilage.

Defective work which can be repaired is covered by a shop order for the additional work required to bring it up to standard, and is charged to overhead. The effect is that the cost of repair is considered the cost of spoilage on the part or parts. The reasons for spoilage or defective work are constantly under review in the inspectors reports.

Shipping department authorization copies of the invoices are costed at the standard catalogued cost, crediting Finished Goods and debiting General Ledger Control (cost of sales account) in the month end manufacturing journal entries.

The variance accounts are not closed monthly, but are taken into the monthly Profit and Loss statements to adjust the cost of sales to actual. At the year end the variance accounts are closed out to Cost of Sales.

New tools, dies and jigs made in the toolroom and which are to be capitalized, do not enter work in process for products, but are made up under shop order control and capitalized directly therefrom. The costs of capitalized work is of course deducted from the service department costs in which the asset was made up.

SHIPPING MASTER

ACKNOWLEDGMENT

FACTORY SHIPPING SHEET

FACTORY SERVICE DEPT. COPY

BILLING DEPT. COPY

ARSON SALES DEPT. COPY

SALESMAN'S COPY

SERVICE RECORD

SCHEDULER

BALANCE ORDER COPY

CUSTOMER'S SHIPPING MEMO

IMPORTANT

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WEEKLY SHIPPING SERVICE OR VISOR RECORD

PRODUCTION COST RECORD

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## Employees' Comfort, Health and Safety

By D. M. YOUNG,

Personnel Manager, Lever Brothers, Ltd., Toronto.

An Address Before the Montreal Chapter.

Long before I came to this meeting, I knew that I would feel at home here. Your program for the 1945-1946 season told me that I would find myself amongst kindred spirits. Listen again to what your program says about the objects of the Cost and Management Institute:

- (a) To promote the study and application of the Science of Cost Accounting and Industrial Management.
- (b) To develop and foster in commerce and industry a wider adoption of scientific organization and cost accounting methods as an aid to management and executive control.

Turning the page we find that in order to forward these objects during the 1945-1946 season you have chosen twelve subjects for discussion, fifty per cent. of which have to do exclusively with human relationships. What more could a personnel manager ask than recognition of the fact that half the science of management is the art of handling people?

One is constantly impressed by the keen interest which office management is taking in the various aspects of personnel administration. It is significant that some of the most constructive research into personnel problems which is currently being carried out is sponsored by management groups which have as yet had no dealings with labour unions. Clearly this is attributable to our eagerness to profit by the trials and tribulations of our Production Management colleagues who have had to bear the brunt of organized labour's attack upon industries' policies relating to wages, hours of work, discipline and employee welfare. Precisely because the majority of you are not members of factory line management I count it a special privilege to be given an opportunity to discuss with you the subject of Employees' Comfort, Health and Safety.

During recent years our newspapers, magazines and employee publications have overflowed with articles and illustrations concerning Cafeterias, First Aid Rooms and Suggestion Plans. Such plans deserve publicity if they are parts of well-rounded, constructive personnel programs. But all too often a glossy-finished company paper hides a lack of any personnel program whatsoever. Public relations and employee relations have become so intermingled and confused that people have begun to question the sincerity of industry in providing for the welfare of its employees. And to be truthful, haven't you often expressed disgust at the wide publicity given to a single benefit plan introduced by a company whose staff relationships are notoriously bad and rapidly growing worse?

It is high time that we did some clear thinking about our motives in establishing welfare plans. What are our underlying principles, and what are our objectives? Are we, as I have heard it variously expressed, seeking publicity, combatting labour unions, or dispensing charity?

Much has been said about the power of human thought. It is a

## EMPLOYEES' COMFORT, HEALTH AND SAFETY

sobering and rather terrifying experience when we awaken to the full realization that we are influencing others in the shaping of the company's policies and progress to just as great an extent as others are influencing us. Too seldom do we remember, however, that our thoughts and attitudes are more powerful weapons than the words which we use to express them.

Similar influences are at work in inter-company relationships. One company by its attitude towards its employees can have a profound effect upon employee relations in other companies with which it comes in contact—its competitors, its suppliers and its customers. Not alone by what our companies do, but by the principles which shape their actions will the future of industry be determined.

The importance of responsible citizenship is recognized in these difficult days as never before. We have been appalled by the ease with which intelligent people are hoodwinked by their own apathy into throwing away their freedom and their integrity. To-day the peoples of the world recognize clearly that democracy depends upon responsible citizenship, that each individual must not only obey the law, but must also take an intelligent and active interest in the principles upon which the law is founded, if our way of life is to survive.



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## COST AND MANAGEMENT

Our social system in Canada presupposes that each company will fulfil its responsibility of citizenship as an entity in the industrial community and the nation. On such a supposition alone can the cause of free enterprise be pleaded, and free enterprise will survive only if this supposition becomes a reality.

What are a company's responsibilities of citizenship? Surely we must place high on the list its responsibility towards those citizens who spend so much of their lives within its walls. Through legislation some protection has been provided against those calamities to which industry contributes—illness, accident, loss of earnings and death. Industry must play its part by supplementing, preferably to the point of adequacy, the provisions which the Government has made for the security of the worker.

Having outlined the underlying principles of industry's responsibility for its workers, we can now safely proceed to state our objectives without fear of being misunderstood or contradicted. Quite simply and honestly our objectives are economic—the production and distribution of a useful product at a reasonable price, in such a way as to provide a fair return to labour and to capital.

I have no patience with people who infer that a high principle is incompatible with an economic objective. The doting husband who buys his wife a fur coat is nonetheless generous because he hopes that it will outlast the cloth coat which she is discarding. The ancient who adjured his readers to cast their bread upon the waters was at heart an economist with high ideals. He simply gave his readers credit for having sufficient intelligence to cast it in the right direction.

Consideration for the comfort of employees can produce important results for the company if properly directed. Let me cite an example from the experience of my own company.

The control of smoking in any company is a problem, and our company was no exception. For many years it had been dealt with by the simple expedient of forbidding it anywhere in the factory on the grounds that insurance regulations required us to do so. However, having in mind that this imposed a heavy burden upon the confirmed smoker and realizing that good employees are important assets, the Company turned a blind eye towards smoking in the washrooms.

On the surface the results of this policy appeared to be satisfactory. It was only very rarely that anyone was found smoking in the plant, and the fire hazard in the washrooms was negligible.

It was not until the employees asked that some improvement be made in the smoking facilities that we began to realize that many other seemingly unrelated problems stemmed from our "No Smoking" policy. The employees had complained about overcrowding in the washroom, despite the fact that inspectors assured us that they were more than adequate for the purposes for which they were intended. There was no denying, however, that they were always crowded, and the air was blue with smoke and the floors littered with cigarette butts.

For some time we had been struggling to control employees absent from their work places for long and frequent intervals during the day. We began to realize that they were leaving their departments merely to obtain a few brief puffs on a cigarette, often travelling to a distant section of the plant to

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find a washroom that was not too closely supervised. We tried to correct this situation by frequent inspection of the washrooms, but very little improvement resulted.

After discussing the situation with our insurance underwriters, we came to the conclusion that there were one or two sections, such as the boiler house, where there never had been and never would be any real hazard from smoking. These sections were designated as smoking areas, and employees in these areas were invited to smoke at work. Certain other sections where definite hazard existed due to the presence of inflammable gases and liquids were continued as no smoking areas. In the remainder of the departments we provided facilities for smoking close to the work place.

In each such department we established a designated smoking area. A place was chosen in plain view of everyone and close to the foreman's office and an area about eight feet square marked out on the floor. This was equipped with a bench, a solid smoking stand, and a fireproof receptacle for waste paper.

The employees were then invited to smoke at any time that they could do so without interrupting production, provided that they did so only in the designated smoking areas. Smoking in the washrooms—or any place other than a designated area—was made grounds for instant dismissal.

From the beginning the plan was a great success. After a few days you could fire a shotgun through the door of any of the washrooms with an even chance that you wouldn't hurt anybody. The washrooms are tidy and the employees have developed a new pride in keeping them that way. The job of the foreman is made easier and production is improved because employees are more constantly on the job. Employees seldom stay in the smoking areas for long periods or visit them too frequently, partly because they are under the watchful eye of the foreman, but particularly because they are in view of their fellow workers—non-smokers who are probably working a little harder in order to keep the job going till the smokers return.

The offices were also designated as smoking areas and ash trays provided upon request. Similar benefits resulted.

As a matter of principal the company recognized that the problem presented by the employees deserved careful consideration. The solution was designed to meet the need of the employees while serving to advance the interests of the Company.

Of course, there was another factor essential to the success of the plan. It required co-operation to make it work. But if a co-operative spirit had not been present, the employees might never have approached the Company, and the Company would have gone on struggling unsuccessfully with its problems of lost time and contracting washrooms.

It has been said that the use of the word "We" is a defense mechanism adopted by an editor to convince his public that there are too many of him to fight. If I make frequent reference to what "we" do you will understand that there are two reasons for it. First of all I am proud of what my company is doing. Secondly it is the proving ground of my company's experience with which I am most familiar.

As a very ordinary example of the value of co-operation I would like to tell you about our Cafeteria Committee. The company operates at a not



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inconsiderable expense a Cafeteria for the use of the staff. Its object, briefly, is to so successfully compete with the lunch box that during working hours at least, all employees will obtain a nourishing, properly balanced meal.

No cafeteria is ever completely free from criticism. There are always two schools of thought about the presence of salad dressing in the chopped egg sandwiches. But during the war years it became apparent that the employees lacked an appreciation of the difficulties under which the Cafeteria was operating.

Accordingly a Cafeteria Committee was organized, comprising elected representatives of factory and office staffs, together with management representatives, with three stated objectives:

1. To advise the company concerning the operation of the Cafeteria.
2. To provide a regularized procedure for the filing of complaints.
3. To better inform the employees concerning the problems of the Cafeteria and its costs of operation and to develop a greater appreciation of the services which it renders.

The Committee meets regularly every other month and gives careful consideration to a multitude of problems ranging from cold soup to storage space. Every complaint is carefully considered and minutes of the meetings are published on the notice boards. During 1944 the company asked the committee to recommend ways and means whereby the rapidly rising operating costs might be reduced. The committee held a series of meetings during which a careful study was made of all aspects of the Cafeteria's operations. Committee members visited other industrial cafeterias in the district in order to make a comparison of meals, prices and operating methods.

The final report submitted to the company's Board of Directors by the Cafeteria Committee stated that no suggestions could be offered for reducing the operating loss without

- (a) reducing quality, or
- (b) reducing quantity, or
- (c) increasing prices

The Committee therefore recommended—and let me remind you that the committee members were elected employee representatives—the Committee recommended that the prices of the meals be raised.

The responsibility to manage must always rest squarely upon the shoulders of management, but we believe that none of the rights of management are surrendered when we ask the opinions of our employees concerning those services which the company establishes for their benefit, and have expressed that belief in our signed agreement with our Union. In practice, as our experience with the Cafeteria Committee proves, the employees will recommend action which is in the company's best interest if they are given the full facts upon which to base their opinions.

It seems to be the popular conception that a spirit of co-operation is nothing more nor less than an air of conviviality. Don't be too sure that you always know what is good for your employees. They are intelligent adults with sincere intentions and sound idea. Given an opportunity to make constructive criticisms and suggestions towards the formulation of your plans, they will often prove very helpful and sometimes will save you from embarrassing mistakes. Many a welfare plan which makes excellent reading



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fails to prove effective because no one has taken the trouble to find out whether the needs of the employees are actually being met. Invite the comments of your employees in an atmosphere of live, objective co-operation that engenders an appreciation of each other's purpose and integrity.

Let's go back over the ground again. Briefly, what we have said is this. Start with a principle, set your objective, and enlist the co-operation of your employees to achieve that objective. In the field of industrial health at least, the principle of responsibility for the well-being of employees is widely accepted. I hope that you will not misunderstand when I express the fear that in matters of health we are in danger of losing sight of our objective in our enthusiastic acceptance of the principal. It is a cold, hard fact—whether we like it or not—that in times of economic distress industry will continue to invest money in health services only if it can be shown that the investment pays dividends. And a health program **will** pay dividends—to industry as well as to employees—if it is shaped to that end.

The cost of illness to industry is tremendous. In terms alone of time lost in Canadian companies it has been reckoned in the millions. But lost time is only a small portion of the cost. Every company carries its share of employees who are unable through disabilities to carry a full day's work. The common cold alone makes dreadful inroads upon the efficiency of any organization. You will be able to recall from your own experiences many instances where years of training invested in a potential executive have been wasted because his health breaks down at the very time when his leadership was most needed.

It is not possible to measure with any degree of accuracy the value of a health program to a company. But there are certain statistics which give a very clear indication of its effectiveness. Again citing our own experience, during the year 1945 the absence due to illness and accident was reduced by 9,122 man-days below the year 1943. Translated into manpower, the Company through its health program provided in a time of manpower shortage 45 loyal, healthy, full-trained employees of all grades and put them to work in the organization. Do you think that I exaggerate if I suggest that the yearly value to the Company of the services of those employees is a minimum of, say \$500.00 each? If my estimate is reasonable, the Company's health program has paid its own way in terms of reduced absenteeism alone. This takes no account of the benefits to the Company in terms of increased efficiency, of training well invested, of increased employee morale and goodwill.

Certain other statistics will interest you. During the year 1945, 18,682 visits were made to the Company's Health Center by employees. In 168 cases employees were referred for medical or surgical treatment for conditions which would have proved much more serious had prompt treatment not been given. On the other hand, a recent X-Ray survey of one thousand employees failed to reveal a single case of tuberculosis. Figures such as these are cold and uncompromising, but behind them lie countless human interest stories—stories of physical and mental suffering, of successful recoveries and grateful appreciation.

A health program can only be successful if the employees play their part in it. You can't cure a stomach ulcer by telling the patient that he has one. To begin with, unless he has faith in you he won't believe you. But

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even if you convince him, you need his whole-hearted co-operation in following the instructions which you suggest for him. It is essential that the employees believe whole-heartedly in the program you have established. So often employees become suspicious of a Company's motives in providing a medical department because the medical staff divide their time between caring for the ill and injured and acting as sleuths to catch out the worker who is suffering from a hangover. The business of the doctors and nurses is health. If they make misdemeanors and unjustified absence their business, they will lose the confidence of the employees and thereby defeat the purpose for which the medical staff was engaged.

No part of a well-founded personnel program offers greater rewards than Accident Prevention. The staggering wastage of men, money and materials through industrial accidents is common knowledge. But the satisfaction of contributing to the safety of workers is a far greater reward to those who are privileged to share it.

There are three progressive stages in the building of a sound safety program: Sympathize, Economize, and Publicize. First lay a solid foundation of sympathy for fellow workers over as large an area of the organization as will absorb it. Second, bring the profit motive well forward, in order to enlist the co-operation of those who are economy-minded and to provide an additional incentive to the softer-hearted. Third, when your program is built and the roof is on, decorate it with bright colours to make it an attractive place to live in and the envy of your neighbours.

So often the decorators are at work shellacking and polishing even before the foundation is laid. Publicity based on sound policy and concrete accomplishment is good—it advances the company in the estimation of the public and sets a laudable example for other companies to follow. But the public is not long deceived by the company which boasts of its safety record while it brings its employees in to work on crutches in order to "avoid" lost-time accidents, because for every publicity agent a company engages there are a hundred employees spreading the truth amongst their many hundreds of relatives and friends.

Any clerk can build an accident record, but the primary purpose of a safety program is to prevent accidents. We have accidents in our plants—lots of them. Fortunately comparatively few of them result in injuries. We maintain a safety record, and we crowd into it anything that occurs in the plant that bears the slightest resemblance to an accident. We consider this important, for three reasons:

1. It combats any tendency to cover up accidents in order to build a favourable record.
2. It keeps us humble.
3. It tells us the true measure of our task.

We feel that we still have a long way to go. But you may be sure that when we achieve our objective we will tell the world about it. When, by following a principle, you attain a high objective, then—and only then—you have something worth giving to the public.

I suppose when I am older and wiser I will know better than to attempt to discuss the profit motive in employee relations. But to me it is just like the little frame shack behind the farmhouse. You can screen it with lilac bushes if you like, but you won't fool anybody. Everybody knows

## STUDENT SECTION

its' there, and everybody uses it. Perhaps in drawing your attention to the economic aspects of employee relations a useful purpose has been served. We have talked about the needs of the workers and the advancement of the company as though you were entirely separate subjects. But I hope that I have shown that you cannot consider either one without taking the other into account. In the final analysis, the welfare of the employees and the welfare of the company are synonymous.

# « STUDENT SECTION »

## COST ACCOUNTING

Comments by A. Van Harris, C.A.

The Greater Manufacturing Company produce one standard product. Work-in-Process accounts are debited and credited at standards. Stores are carried at standard price.

The Standard Cost Card for one unit of production is:

### Materials—

A — Metal for case .....	1 pc. @ .10	
B — Metal for parts .....	2 pcs. @ .20	
C — Glass .....	2 pcs. @ .10	.70

### Labor—

1-1/3 hours .....	@ .60	.80
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### Manufacturing Expense—

1-1/3 hours .....	@ .75	1.00
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\$2.50

The Standard Manufacturing Expense based on the Company's Budget was calculated as follows:

$$\text{Standard Manufacturing Expense} = \$ 9000. = .75$$

Standard Direct Labour Hours 12,000 direct labour hours

Transactions for the month were:

### 1. Materials Purchased

10500 Material A @ 11 cents
10000 Material B @ 22 cents
12000 Material C @ 9 cents

### 2. Materials Requisitioned

9500 Material A @ 10 cents
18100 Material B @ 20 cents
18400 Material C @ 10 cents

### 3. Payroll — 12500 hours @ 62 cents

### 4. Manufacturing Expense \$9,100

### 5. Production—9000 completed units

## COST AND MANAGEMENT

500 units. 60% completed as to Labour and Manufacturing Expense and to which Material A only had been issued.

6. Sales—9000 units at \$3.00 per unit.

Required:

- (a) Journal Entries to record all transactions for the period as far as the determination of the Gross Profit for the month. Full narratives should be given.
- (b) Determination of Inventory of Work-in-Process as at the end of the month.
- (c) Summary of Variances for the month.

### SOLUTION

#### (a) Journal Entries

(a) Stores .....	\$4,250.
Material Price Variances .....	185.
Accounts Payable (or Cash) .....	4,435.

		Standard		Actual	Variance
10,500	A .10	\$1,050.00	.11	\$1,155.00	\$ 105
10,000	B .20	2,000.00	.22	2,200.00	200
12,000	C .10	1,200.00	.09	1,080.00	120 CR.
		<hr/>		<hr/>	<hr/>
		4,250.00		4,435.00	185

(b) Materials In Process .....	6,350.
Material Quantity Variance .....	60.
Stores .....	6,410

9000 units (500 + Mat. A)	Standard	Actual	Variance
A — 9,500 @ .10 .....	950	9500 at 10	950
B — 18,000 @ .20 .....	3,600	18100 at 20	3,620 20
C — 18,000 @ .10 .....	1,800	18400 at 10	1,840 40
	<hr/>	<hr/>	<hr/>
	\$6,350	\$6,410	60

(c) Labor in Process .....	7,440
Wage Rate Variance 12,500 hours @ .02¢ per hour .....	250
Quantity Labour Performance Variance 100 hours ½ .60 .....	60.
Accrued Payroll .....	7,750

Hours Required — 9,000 units at 1-1/3 hours.....	12000 hrs.
500 x 3/5 at 1-1/3 hrs. ....	400

Standard Labour Hours .....	12400
Actual .....	12500

Variance .....	100 hrs.
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(d) Manufacturing Expense in Process 12400 hrs. @ 75¢ .....	9300.
Manufacturing Expense - Expenditure Variance	

# STUDENT SECTION

(9100 - 9000) .....	100	
Manufacturing Expense Efficiency Variance		
Actual D.L.H. 12500		
Standard D.L.H. 12400		
100 @ .75	75.	
Manufacturing Expense — Capacity Variance		
Budgeted D.L.H. 12000		
Actual D.L.H. 12500		
500 @ .75	375.	
Accounts Payable (etc.)	9100.	
(e) Finished Goods .....	22,500	
Materials in Process .....		6,300
Labour in Process .....		7,200
Manufacturing Expense in Process .....		9,000
,9000 units — Mat. .70c	\$6,300.	
Lab. .80	7,200.	
Mdg. Exp. 1.00	9,000.	
2.50	\$22,500.	
(f) Cost of Goods Sold .....	22,500	
Finished Good .....		22,500
9,000 units at \$2.50		
(g) Accounts Receivable .....	27,000	
Sales .....		27,000
9,000 units at \$3.00		
(h) Sales .....	27,000	
Cost of Goods Sold .....		22,500
Trading — Gross Profit .....		4,500
(B) Inventory of Work-in-Process — End of Month		
Materials in Process (6350 - 6300) .....	50	
(500 units Mat. A at .10 - \$50)		
Labour in Process (7440 - 7200) .....	240	
(500 units x 3/5 at 80c - 240)		
Mfg. Expense in Process (9300 - 9000) .....	300	
(500 units × 3/5 at \$1.00-\$3.00)		
	\$ 590	
(C) Summary of Variances		
Material Price Variance .....	185	
Material Quantity Variance .....	60	245.
Wage Rate Variance .....	250	
Labour Performance Variance .....	60	310
Mfg. Expense Variance — Capacity .....	375 CR.	
" " " — Efficiency ....	75	
" " " — Expenditure	100	200 CR.
		355

## COST AND MANAGEMENT

### COMMENTS

This problem and solution which follows the pattern of several problems given in conjunction with the lecture series in Standard Costs illustrates particularly the allocation of the differences between actual and standard figures to the variance accounts.

Recently, at the instigation of the Society of Cost Accountants and Industrial Engineers, a group of instructors in Cost Accounting in Eastern Canada met and reviewed among other things the terminology applied to the variance accounts in Standard Costs. The instructors pointed out the number of synonymous captions applied by different authors in cost accounting texts and agreed after some discussion that for purposes of uniformity, and as a means to assist the student, the course material on this subject should be amended, where possible to use the exact captions and these only, which are set down above. It is recognized that in actual practice not all these variance accounts may be used, but for an average system, knowledge of as many as are developed in this solution would be sufficient to take care of the management's requirements.

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